

## PATENT ABSTRACTS OF JAPAN

(11)Publication number : 10-291529

(43)Date of publication of application : 04.11.1998

(51)Int.Cl.

B65D 17/34

B65D 17/347

B65D 17/353

B65D 81/34

(21)Application number : 09-113660

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(22)Date of filing : 16.04.1997

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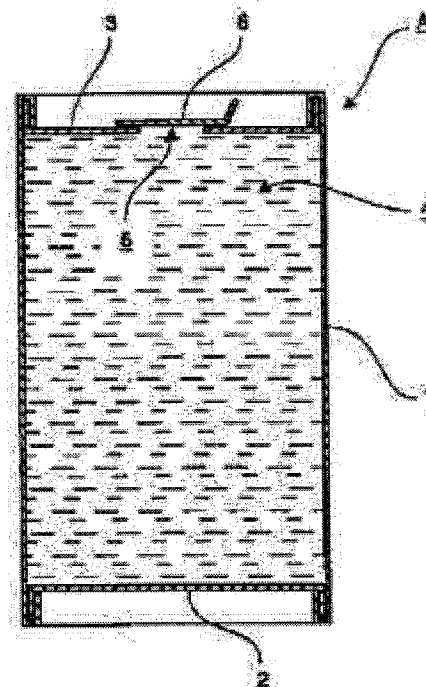
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### (54) PACKAGING CONTAINER

#### (57)Abstract:

**PROBLEM TO BE SOLVED:** To provide a packaging container which is appropriate in filling and packaging operation, in protection of contents, in a manufacturing cost, and in distribution and sales, which does not cause factors for environmental destruction, pollution or the like and which does not cause problems in garbage or the like.

**SOLUTION:** A cylindrical body 1 comprises a laminate comprising at least a heat-sealing polyolefin resin layer, a cup material sheet, a resin film having a thin inorganic oxide film and a heat-sealing polyolefin resin layer wherein they are sequentially laminated. A bottom lid 2 and an upper lid 3 comprise a laminate comprising at least a heat-sealing polyolefin resin layer, a resin film layer excellent in strength, a cup material sheet, a resin film having a thin inorganic oxide film and a heat-sealing polyolefin resin layer wherein they are sequentially laminated. A pull-tab 6 comprises a laminate comprising at least a paper base material, a resin film having a thin inorganic oxide film and a heat-sealing polyolefin resin layer wherein they are sequentially laminated.





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CLAIMS

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[Claim(s)]

[Claim 1] In a container for a package which consists of a top-cover part with a pull tab attached to a cylindrical body, a base lid part attached to a lower end part of this cylindrical body, and an upper bed part of this cylindrical body, At least the above-mentioned cylindrical body A heat-sealing nature polyolefin resin layer, It constitutes from cup stencil paper, a resin film which has a thin film of an inorganic oxide, and a layered product which laminated a heat-sealing nature polyolefin resin layer successively, At least an above-mentioned base lid part and a top-cover part A heat-sealing nature polyolefin resin layer, A resin film layer excellent in intensity, cup stencil paper, a resin film that has a thin film of an inorganic oxide, And a heat-sealing nature polyolefin resin layer is constituted from a layered product laminated successively, A resin film which has a thin film of a paper base and an inorganic oxide for the above-mentioned pull tab at least and a container for a package constituting a heat-sealing nature polyolefin resin layer from a layered product laminated successively.

[Claim 2] A container for a package indicated to above-mentioned Claim 1, wherein a heat-sealing nature polyolefin resin layer consists of polyethylene system resin.

[Claim 3] A container for a package which whether it is above \*\*\*\*\*1\*\*, wherein cup stencil paper consists of the basis weight 200 - paper stencil paper of 300 g/m<sup>2</sup> indicates to 2.

[Claim 4] Above-mentioned Claim 1, wherein a thin film of an inorganic oxide consists of a vacuum evaporation film of a silicon oxide, a container for a package indicated to 2 or 3.

[Claim 5] A container for a package indicated to Claims 1, 2 and 3 of the above, wherein a thin film of an inorganic oxide consists of a vacuum evaporation film of a multilayer inorganic oxide, or 4.

[Claim 6] A container for a package which a resin film layer excellent in intensity indicates to Claims 1, 2, 3 and 4 of the above consisting of a biaxial-stretching polyethylene terephthalate film, or 5.

[Claim 7] A filling port with which a base lid part fills up contents is drilled, and further after being filled up with contents, A resin film in which this filling port has a thin film of a paper base and an inorganic oxide at least, And the above-mentioned Claims 1, 2, 3 and 4 re-closing down by a filling port sealant which constituted a heat-sealing nature polyolefin resin layer from a layered product laminated successively, a container for a package indicated to 5 or 6.

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[Translation done.]

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DETAILED DESCRIPTION

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[Detailed Description of the Invention]

[0001]

[Field of the Invention] This invention relates to containers for a package suitable for the filling package of beverage liquid, such as juice, cow's milk, alcohol, water, and others, such as a paper can and a paper cup, in more detail about the container for a package.

[0002]

[Description of the Prior Art] Although various things are conventionally developed and proposed as a container for a package suitable for the filling package of beverage liquid, such as juice, cow's milk, alcohol, water, and others, various kinds of containers for a package, such as a glass bottle, a metal can, a synthetic resin molded container, a plastic film bag-making object, and a paper made container, are usually used. These containers for a package have various \*\*\*\*, such as filling package work justice, protection justice of contents, manufacturing-cost justice, circulation sales justice, and others, and are used widely.

[0003]

[Problem to be solved by the invention] However, to call the container for a package ringleaders, such as environmental destruction and a waste problem, for example, to collect by type after the disposal justice as the combustion garbage or use after use, and to have \*\*\*\* from viewpoints of environment, such as the reuse-ized justice and others, or refuse disposal is needed in recent years. When manufacturing the container for a package, it is in the situation where the material which does not produce problems, such as a public nuisance, must be selected and manufactured. For example, although the above-mentioned glass bottle, metal cans, etc. are collected and it is reuse-ized, the actual condition is there being a problem it not being yet enough in the recovery, and those containers' being thrown away after use, being neglected as it is, and having become one of the causes of environmental destruction. In a synthetic resin molded container, although to collect and reproduce in a polyester molded container and to apply to other uses, for example, although it is the same as that of the above-mentioned glass bottle, a metal can, etc. is tried, it is the actual condition which cannot be referred to as still enough in the recovery itself. In a plastic film bag-making object, a paper made container, etc., For example, as a barrier property material to oxygen gas, a steam, etc., since aluminium foil etc. are used, even if it discards as combustion garbage, there is a problem of destroying a combustion furnace, and there is a problem that it is also very difficult to collect the aluminium foil between layers, etc. by type further. Then, this invention is having various \*\*\*\*, such as filling package work

justice, protection justice of contents, manufacturing-cost justice, circulation sales justice, and others, and providing further the container for a package which does not cause a waste problem etc. failing in factors, such as environmental destruction and a public nuisance.

[0004]

[Means for solving problem]this invention person pays his attention to the resin film which has a thin film of an inorganic oxide variously as a result of research that the above problems should be solved, In the container for a package which consists of a top-cover part with a pull tab attached to the cylindrical body, the base lid part attached to the lower end part of this cylindrical body, and the upper bed part of this cylindrical body, As a laminated material which constitutes this cylindrical body, a base lid part, a top-cover part, and a pull tab, The container for a package is manufactured and \*(ed) using the laminated material which contains altogether the resin film which has a thin film of an inorganic oxide, When the filling package of the various goods is carried out into this container for a package, have the high barrier property to oxygen gas, a steam, etc., and The protection justice of contents, Even if it excels in storing aptitude etc., and the fabrication operation of the container for a package, the filling package work of contents, etc. can be done easily, and it has very high filling package processing suitability further and it covers a package product over a microwave oven, even if it fully has and carries out after-use disposal treatment of the microwave oven aptitude — as combustion garbage — very — disposal treatment — it finds out that the properly outstanding container for a package can be manufactured, and this invention is completed.

[0005]Namely, in the container for a package which consists of a top-cover part with a pull tab which attached this invention to the cylindrical body, the base lid part attached to the lower end part of this cylindrical body, and the upper bed part of this cylindrical body, At least the above-mentioned cylindrical body A heat-sealing nature polyolefin resin layer, It constitutes from cup stencil paper, a resin film which has a thin film of an inorganic oxide, and a layered product which laminated the heat-sealing nature polyolefin resin layer successively, At least an above-mentioned base lid part and top-cover part A heat-sealing nature polyolefin resin layer, The resin film layer excellent in intensity, cup stencil paper, the resin film that has a thin film of an inorganic oxide, And a heat-sealing nature polyolefin resin layer is constituted from a layered product laminated successively, It is related with the container for a package constituting from a resin film which has a thin film of a paper base and an inorganic oxide for the above-mentioned pull tab at least, and a layered product which laminated the heat-sealing nature polyolefin resin layer successively.

[0006]

[Mode for carrying out the invention]Above-mentioned this invention is explained in more detail below. First, when it explains using Drawings, by illustrating the example about the composition of the container for a package concerning this invention drawing 1, Are the composition of the container for a package concerning this invention a shown rough sectional view, and drawing 2, It is a rough sectional view showing the composition of the container for a package which consists of another form about the container for a package concerning this invention, and drawing 3, drawing 4, drawing 5, and drawing 6 are the rough sectional views showing the lamination of the laminated material used for the container for a package concerning above-mentioned this invention.

[0007]About the container A for a package concerning this invention, if the example is illustrated, as shown in drawing 1, the cylindrical body 1 and the base lid part 2 attached to the lower end part of this cylindrical body 1 with heat sealing etc. - and, The pull tab 6 which consists of the top-cover part 3 attached to the upper bed part of this cylindrical body 1 with heat sealing etc., and has the opening 5 for taking out contents 4 grade in this top-cover part 3 further, and seals this opening 5 consists of composition attached with heat sealing etc.

[0008]Next, if the container B for a package which consists of another form about the container for a package concerning this invention again is illustrated, as shown in drawing 2, the cylindrical body 1 and the base lid part 2 attached to the lower end part of this cylindrical body 1 with heat sealing etc. — and, Consist of the top-cover part 3 attached to the upper bed part of this cylindrical body 1 with heat sealing etc., and further in this top-cover part 3, The pull tab 6 which has the opening 5 for taking out contents 4 grade, and seals this opening 5, It is attached with heat sealing etc. and the filling port 7 which fills up the further above-mentioned base lid part 2 with the contents 4 is drilled, and further, after being filled up with the contents 4, this filling port 7 consists of composition re-closed with heat sealing etc. by the filling port sealant 8.

[0009]In the above, as a laminated material which constitutes the cylindrical body 1, If the example is given, as shown in drawing 3, from the outside at least, It comprises the heat-sealing nature polyolefin resin layer 21, the cup stencil paper 22, the resin film 23 that has a thin film of an inorganic oxide, and the laminated material C which laminated successively the heat-sealing nature polyolefin resin layer 21a. In order to \*\*, to use the above-mentioned laminated material in this invention and to manufacture a cylindrical body, Although not illustrated, round off this laminated material and, for example The field of the heat-sealing nature polyolefin resin layer of the outside of the both-the-right-and-left-ends part, It can manufacture by piling up the field of an inside heat-sealing nature poly OREFII system resin layer, heat sealing the polymerization portion of the both the right and left ends after an appropriate time, and forming a seal part etc. In the above, as for the end face of the laminated material in the inner surface side of a cylindrical body, in order to prevent osmosis of contents, etc., it is desirable to perform end face processing processing of carrying out skive hemming work of the end face of an end, or performing tape application processing for example.

[0010]Next, in the above, again as a laminated material which constitutes a base lid part and a top-cover part, If the example is given, as shown in drawing 4, from the outside at least, It comprises the heat-sealing nature poly OREFII system resin layer 31, the resin film layer 32 excellent in intensity, the cup stencil paper 33, the resin film 34 that has a thin film of an inorganic oxide, and the laminated material D which laminated successively the heat-sealing nature polyolefin resin layer 31a. \*\* and in this invention as a method of attaching an above-mentioned base lid part or top-cover part to the above-mentioned cylindrical body, Although not illustrated, the above-mentioned lower end part and upper bed part of a cylindrical body are inserted into the inner surface side, for example, The base lid part and top-cover part of the shape of a menko which has a top panel and a tubed suspension part connected with this are inserted so that the tubed suspension part may overlap a cylindrical body in the above-mentioned gap, the both can be heat sealed in the inserted-in gap after an appropriate time, and a seal part can be formed and attached to it.

[0011]In this invention, as a laminated material which constitutes a pull tab, If

the example is given, as shown in drawing 5, it is constituted from the outside at least by the paper base 41, the resin film 42 which has a thin film of an inorganic oxide, and the layered product E which laminated successively the heat-sealing nature poly OREFII system resin layer 43. In order to \*\* and to attach the above pull tabs to a top-cover part in this invention, Although not illustrated, in order to, form the opening for taking out contents in a top-cover part for example, and to seal this opening subsequently, It can attach by making the field of the heat-sealing nature polyolefin resin layer on the outside of a top-cover part, and the field of the heat-sealing nature poly OREFII system resin layer which exists inside a pull tab counter, piling up, heat sealing the both after an appropriate time, and carrying out heating welding. In this invention, the cut end end face of the opening of the above-mentioned top-cover part is not illustrated in order that contents may prevent the end face from \*\*\*\*\* (ing), but it can perform end face processing processing of tape application processing etc. to the cut end end face of the opening of this top-cover part, for example. In this invention, as a heating welding degree for attaching the above-mentioned pull tab, For example, it is desirable to carry out heating welding by the intensity of the grade which has the easy-releasability which is a grade which can adhere firmly during storage or circulation sale, and can tear off this pull tab at the time of the use.

[0012]Next, in this invention, as a laminated material which constitutes a filling port sealant, If the example is given, as shown in drawing 6, it comprises the layered product F which laminated successively the resin film 52 which has a thin film of the paper base 51 and an inorganic oxide at least, and the heat-sealing nature poly OREFII system resin layer 53 from the outside like the laminated material which constitutes the above-mentioned pull tab. In order to \*\* and to attach the above filling port sealants to a filling port in this invention, Although not illustrated, after, forming the filling port for filling up a base lid part with contents for example, and being filled up with contents from this filling port subsequently, in order to seal this filling port, It can attach by making the field of the heat-sealing nature polyolefin resin layer on the outside of a base lid part, and the field of the heat-sealing nature poly OREFII system resin layer which exists inside a filling port sealant counter, piling up, heat sealing the both after an appropriate time, and carrying out heating welding. In this invention, the cut end end face of the filling port of the above-mentioned base lid part is not illustrated in order that contents may prevent the end face from \*\*\*\*\* (ing), but it can perform end face processing processing of tape application processing etc. to the cut end end face of the filling port of this base lid part, for example. In this invention, it is desirable to carry out heating welding firmly so that it may adhere firmly during storage or circulation sale and disclosure of contents, etc. may not be caused, for example as a heating welding degree for attaching the above-mentioned filling port sealant. In this invention, when filled up with contents from the filling port of the above-mentioned base lid part, it is needless to say that the top-cover part on which it makes it come to stick a pull tab is attached to a cylindrical body, of course.

[0013]The container for a package of the illustration illustrated above illustrates an example of the container for a package concerning this invention, and it is a thing needless to say that it is not that to which this invention is limited by this. For example, by the purpose of the container for a package, the kind of contents, a storage form, circulation and sales styles, a use, others, etc., the form of the lamination of a laminated material and the container for a package, the

seal form, others, etc. can be selected arbitrarily, and the container for a package of various forms can be manufactured.

[0014]Next, in this invention, if the material used in order to manufacture the laminated material which constitutes the container for a package concerning above this inventions is explained, various things can be used as this material. First, as heat-sealing nature poly OREFUN system resin which constitutes the heat-sealing nature polyolefin resin layer located in the outside and the inside of a laminated material in this invention, Can use the film thru/or sheet of polyolefin system resin which carries out melting and can be mutually welded with heat, and specifically, For example, low density polyethylene, medium density polyethylene, high density polyethylene, Straight-chain-shape (line) low density polyethylene, polypropylene, an ethylene-vinylacetate copolymer, lonomer resin, an ethylene-acrylic acid copolymer, an ethylene-ethyl acrylate copolymer, An ethylene-methacrylic acid copolymer, an ethylene-methyl methacrylate copolymer, Ethylene propylene rubber, methylpentene polymer, polybutene polymer, Polyolefin system resin, such as polyethylene or polypropylene, acrylic acid, The film thru/or sheets of resin denatured with unsaturated carboxylic acid, such as methacrylic acid, maleic acid, a maleic anhydride, boletic acid, and itaconic acid, such as acid modified polyolefin resin and others, can be used. It \*\* and an above-mentioned film thru/or sheet can be used in the state of the coating membrane by the constituent containing the resin. As thickness of the film or a film thru/or a sheet, 5 micrometers thru/or about 300 micrometers are preferred, and 10 micrometers thru/or about 100 micrometers are still more desirable.

[0015]Next, in this invention, again as cup stencil paper which constitutes a laminated material, This can make the formability as a container for a package, flexibility, or rigidity able to hold, and can use \*\* of strong size nature, a non-bleached paper base or paper bases, such as snow-white rolled paper, kraft, a paperboard, and a converted paper, others, etc. In the above, it is desirable as cup stencil paper the thing like basis weight [ of about 80-600g/m ] <sup>2</sup> and to use the thing like basis weight about 100 to 450 g/m<sup>2</sup> preferably. \*\*. In this invention, printing drawing of the printing pattern of a request of a character, a figure, a sign, a pattern, a pattern, etc. may be carried out by the usual print processes at the above cup stencil paper, for example.

[0016]When the resin film which has a thin film of the inorganic oxide which constitutes a laminated material in this invention is explained, first as a resin film, Anything can be used if it is the film thru/or sheet of a plastic which can hold the thin film of inorganic oxides, such as a silicon oxide and an aluminum oxide, For example, polyolefin system resin, such as polyethylene, polypropylene, and polybutene, (Meta) Acrylic resin, polyvinyl chloride system resin, polystyrene system resin, Polyvinylidene chloride system resin, an ethylene-vinylacetate copolymer saponification thing, Various kinds of film thru/or sheets of resin, such as polyvinyl alcohol, polycarbonate system resin, fluoro resin, polyvinyl acetate system resin, acetal system resin, polyester system resin, polyamide system resin, and others, can be used. The film thru/or sheet of these resin may be extended by one axis thru/or 2 shaft orientations, and its about 12-300 micrometers are desirable preferably about 5-500 micrometers as the thickness. As the above-mentioned film thru/or sheet of resin, if necessary, it can coat with an anchor coat agent etc. on the surface, and smooth surface-ized processing etc. can also be performed.



[0017]Next, in this invention again as a thin film of the above-mentioned inorganic oxide, If it is the thin film which turned amorphously (amorphous) about a metal oxide fundamentally, are usable, For example, for example, silicon (Si), aluminum (aluminum), magnesium (Mg), The thin film which turned amorphously (amorphous) the oxide of metal, such as calcium (Ca), potassium (K), tin (Sn), sodium (Na), boron (B), titanium (Ti), lead (Pb), a zirconium (Zr), and yttrium (Y), can be used. It \*\* and the thin film which turned the oxide of metal, such as silicon (Si) and aluminum (aluminum), amorphously (amorphous) can be mentioned as a thing suitable for the charge of package material, etc. By the way, amorphously (amorphous) the oxide of the above-mentioned metal the thin film which turned, Can call as a metallic oxide like a silicon oxide, an aluminum oxide, and magnesium oxide, and the notation, for example, it is expressed with  $MO_x$  (however — M expresses a metallic element among a formula — the value of X — a metallic element — respectively — the range — things — \*\*) like  $SiO_x$ ,  $AlO_x$ , and  $MgO_x$ . As a range of the above-mentioned value of X, silicon (Si), 0-2, and aluminum (aluminum) 0-1.5, and magnesium (Mg), 0-1, and calcium (Ca) 0-1, and potassium (K), zero to 0.5, and tin (Sn) — 0-2, and sodium (Na) — in boron (B), zero to 0.5 can take 0-1, and a zirconium (Zr), and, as for 0-1, 5, and titanium (Ti), 0-2, and lead (Pb) can take the value of the range of 0-1.5, as for 0-2, and yttrium (Y). In the above, moreover in the case of  $X=0$  it is perfect metal, and it is not transparent and cannot use it at all, the maximum of the range of X is the value which oxidized thoroughly. In this invention, as a charge of package material, generally it is deficient in the example used except silicon (Si) and aluminum (aluminum), and, as for silicon (Si), the thing of the value of the range of 0.5-1.5 can be used for 1.0-2.0, and aluminum (aluminum). In this invention, although it changes as thickness of the thin film of the above inorganic oxides with kinds etc. of oxide of the metal to be used or metal, it is desirable to choose arbitrarily and to, form about 50-3000Å within the limits of about 100-2000Å, preferably, for example. In this invention, as a thin film of an inorganic oxide, The thin film of the inorganic oxide which was used with one sort or two sorts or more of mixtures, and was mixed with construction material of a different kind as an oxide of the metal which in the state of the layered product which laminated not only one layer of the thin film of an inorganic oxide but two-layer or more than it may be sufficient as, and is used, or metal can also be constituted.

[0018]Next, if how to form the thin film of an inorganic oxide on a resin film is explained in this invention, as a method of starting, For example, physical vapor growth, such as a vacuum deposition method, sputtering process, and the ion plating method (the Physical Vapor Deposition method, PVD), Or chemical-vapor-deposition methods (the Chemical Vapor Deposition method, a CVD method), such as plasma chemistry vapor growth, thermochemistry vapor growth, and photochemistry vapor growth, etc. can be mentioned. In this invention, when manufacturing the resin film which has a thin film of the inorganic oxide used for the charge of package material, plasma chemistry vapor growth is also mainly used in part using a vacuum deposition method. When the example is given, drawing 7 is a rough block diagram showing an example of a rolling-up type vacuum evaporation machine. As shown in drawing 7, the resin film 113 which it begins to roll and lets out from the roll 112 in the vacuum chamber 111, Pass along the coating drum 114, enter into the vacuum evaporation chamber 115, and here, Making [ evaporate the deposition source heated with the crucible 116, and ] oxygen etc. blow off from the oxygen diffuser 117, if

still more nearly necessary. On the resin film 113 on the cooled above-mentioned coating drum 114, By membrane-formation-izing the vacuum evaporation film of an inorganic oxide via the masks 118 and 118, sending out the resin film 113 which subsequently formed the vacuum evaporation film in the vacuum chamber 111, and rolling round to the winding roll 119, The resin film which has a thin film of the inorganic oxide concerning this invention can be manufactured.

[0019]In this invention, if the method of forming the thin film of an inorganic oxide is explained concretely, A vacuum deposition method which uses the oxide of the above metal as a raw material, heats this, and is vapor-deposited on a resin film, Or the oxide of metal or metal can be used for a raw material, and a vacuum evaporation film can be formed using the oxidation reaction vacuum deposition which oxygen is introduced, is oxidized and is vapor-deposited on a resin film, the oxidation reaction vacuum deposition of the plasma support type which supports oxidation reaction with plasma, etc. In this invention, when forming the vacuum evaporation film of a silicon oxide, a vacuum evaporation film can be formed using the plasma chemistry vapor growth which uses the ORGANO siloxane as a raw material.

[0020]Next, as a resin film excellent in the intensity which constitutes the resin film layer excellent in intensity in this invention again, For example, when it constitutes a base lid part and a top-cover part, from being set to one of the basic materials, Have mechanical, physical, chemical, and the character outstanding in others etc., and especially, Have intensity, it is tough, and can use the film thru/or sheet of resin which has heat resistance, and specifically, For example, the film of tough resin, such as polyester system resin, polyamide system resin, polyaramide system resin, polyolefin system resin, polycarbonate system resin, polystyrene system resin, polyacetal system resin, fluororesin, and others, thru/or a sheet, others, etc. can be used. It \*\* and anything, such as an oriented film extended to an unstretched film, 1 shaft orientations, or 2 shaft orientations, can be used as the above-mentioned film thru/or sheet of resin. As thickness of the film, 10 micrometers thru/or about 50 micrometers are desirable preferably 5 micrometers thru/or about 100 micrometers. In this invention, the printing pattern of the request of a character, a figure, a sign, a pattern, a pattern, etc. may be given to front printing printing or back printing printing by the usual print processes at the above base films, for example. Of course, in this invention, the resin film excellent in the above-mentioned intensity is applicable also to the laminated material which constitutes a cylindrical body, a pull tab, a filling port sealant, etc.

[0021]Next, in this invention, again as a paper base used for a pull tab or a filling port sealant, The formability as a pull tab or a filling port sealant, flexibility, rigidity, etc. can be given, and \*\* of strong size nature, a non-bleached paper base or paper bases, such as snow-white rolled paper, kraft, a paperboard, and a converted paper, others, etc. can be used. In the above, it is desirable as a paper base the thing like basis weight about 80 to 600 g/m<sup>2</sup> and to use the thing like basis weight about 100 to 450 g/m<sup>2</sup> preferably. Of course, in this invention, various kinds of films thru/or sheets, etc. of resin excellent in a paper base and the intensity mentioned to the above as a resin film can be made to be able to laminate, and the both can be used together and used.

[0022]By the way, besides the above materials which constitute the laminated material concerning this invention in this invention, if still more nearly necessary, For example, low density polyethylene, medium density polyethylene which

have the barrier property of a steam, water, etc., The film thru/or sheets of resin, such as high density polyethylene, straight-chain-shape low density polyethylene, polypropylene, and ethylene propylene rubber, Or a film thru/or sheets, etc. of resin which have the barrier property to oxygen, a steam, etc., such as a polyvinylidene chloride, polyvinyl alcohol, and an ethylene-vinylacetate copolymer saponification thing, can be used. Such materials can be used combining a kind thru/or more than it. As the above-mentioned film thru/or thickness of a sheet, although it is arbitrary, 10 micrometers thru/or about 100 micrometers are usually still more desirable 5 micrometers thru/or about 300 micrometers.

[0023]As a tape pasted together in this invention in order to process the cut end end face of the filling port of the opening of the above-mentioned top-cover part, or a base lid part, For example, it is desirable to use the tape which laminates successively the above resin film layers excellent in intensity, the resin film which has a thin film of an inorganic oxide, a heat-sealing nature polyolefin resin layer, etc. By using this, all the containers for a package concerning this invention can be used as the container for a package which has a resin film which has a thin film of an inorganic oxide.

[0024]In this invention, usually the container for a package, Since it sets to a severe condition also physically and chemically, to the wrapping which constitutes the container for a package, Severe packaging aptitude is required, and various conditions, such as deformation preventive strength, dropping impact intensity, pinhole-proof nature, heat resistance, sealing performance, quality maintainability, workability, hygienic nature, and others, are required, and for this reason, In this invention, can use the material which satisfies the above terms and conditions, choosing it still more nearly arbitrarily, and specifically, For example, low density polyethylene, medium density polyethylene, high density polyethylene, Linear low density polyethylene, polypropylene, ethylene propylene rubber, An ethylene-vinylacetate copolymer, ionomer resin, an ethylene-ethyl acrylate copolymer, Ethylene-acrylic acid or a methacrylic acid copolymer, methylpentene polymer, Polybutene system resin, polyvinyl chloride system resin, polyvinyl acetate system resin, Polyvinylidene chloride system resin, a vinyl chloride vinylidene chloride copolymer, Poly(meta) acrylic resin, polyacrylic nitrile system resin, polystyrene system resin, an acrylonitrile styrene copolymer (AS system resin), acrylonitrile-butadiene-styrene copolymer (ABS system resin), Polyester system resin, polyamide system resin, polycarbonate system resin, It can be used choosing from the film thru/or sheets of publicly known resin, such as polyvinyl alcohol system resin, the saponification thing of an ethylene-vinylacetate copolymer, fluororesin, diene system resin, polyacetal system resin, polyurethane system resin, a nitrocellulose, and others, arbitrarily. In addition, for example, films, such as cellophane, a synthetic paper, etc. can be used. In this invention, anything, such as what was extended by un-extending, one axis, or 2 shaft orientations, can be used for an above-mentioned film thru/or sheet. The thickness can be used choosing from the range of several to about 300 micrometers, although it is arbitrary. In this invention, the film of which descriptions, such as extrusion membrane formation, inflation membrane formation, and coating membrane, may be sufficient as a film thru/or a sheet.

[0025]Next, if how to manufacture a laminated material using the above materials is explained in above-mentioned this invention, as a method of starting, The method of laminating usual wrapping, for example, the wet lamination nation method, It can carry out by dry lamination process and solventless type dry lamination process,

extrusion lamination process, T-die extrusion-molding method, co-extrusion lamination process, tubular film process, a co-extrusion tubular film process, others, etc. When **\*(ing)** and performing the above-mentioned lamination in this invention, if necessary. For example, corona treatment, ozonization, etc. can be pretreated on a film. For example, an isocyanate system (urethane system), a polyethyleneimine system, Anchor coating agents, such as a poly-butadiene system and an organic titanium system, or a polyurethane system. Publicly known pretreatment of adhesives for a lamination, such as poly acrylic, a polyester system, an epoxy system, a polyvinyl acetate system, a cellulose type, and others, etc., an anchor coat agent, adhesives, etc. can be used.

[0026]Next, if how to manufacture the container for a package using the above laminated materials is explained in this invention. For example, the above laminated materials are used, the blank plate which will, from now on, manufacture the desired container for a package is manufactured, box producing of a drum section, a pars basilaris ossis occipitalis, the head, etc. can be carried out after an appropriate time using this blank plate, and the container for a package of various forms can be manufactured. Anything of forms, such as a cone type, a square shape type, and a round shape, can manufacture the form.

[0027]In this invention, the container for a package manufactured as mentioned above can be used as a paper can, a paper cup, etc. suitable for the filling package of various kinds of beverage liquid, such as juice, cow's milk, alcohol, water, and others, for example. The container for a package concerning this invention is used for the filling package of goods, such as various kinds of sundry articles, such as various kinds of drugs, such as various kinds of cosmetics, such as various kinds of chemical products, such as adhesives and a binder, cream, and cosmetic liquid, medicine, and a diagnostic drug, and a detergent, and others.

[0028]

[Working example]An working example is given and above-mentioned this invention is explained still more concretely.

To the biaxial extension polyethylene terephthalate film side of a biaxial extension polyethylene terephthalate film with a thickness of 12 micrometers which has a vacuum evaporation film of a silicon oxide with an working-example 1(1). thickness of 250 Å, 2 liquid hardening type polyurethane adhesive was applied (it is 5g/m<sup>2</sup> at a dry state), it ranked second, the 60-micrometer-thick lower density polyethylene film was used for this spreading side, and dry laminate of this was carried out. Next, using low density polyethylene for the vacuum evaporation film surface of the silicon oxide of the biaxial extension polyethylene terephthalate film which has a vacuum evaporation film of the above-mentioned silicon oxide, and extruding at 20 micrometers in thickness. The extrusion sand lamination of the cup stencil paper of basis weight [ of 280g/m ]<sup>2</sup> was carried out, further, low density polyethylene was extruded and laminated in thickness of 20 micrometers in the field of this cup stencil paper, and the laminated material used for the cylindrical body which consists of the following composition was manufactured. The adhesives layer / 60 micrometers in thickness with a [ the vacuum evaporation film and thickness ] of of 12 micrometers of a silicon oxide with a [ a low density polyethylene layer / thickness / of 250 Å ] of with a 20-micrometer-thick [ the cup stencil paper / thickness ] of of 20 micrometers of a low density polyethylene layer / basis weight 280 g/m<sup>2</sup> of 2 extension polyethylene terephthalate film layer / thickness 5 g/m<sup>2</sup>.  
 \*\*\*\*\* polyethylene film layer (2) like ., next the above to the biaxial extension

polyethylene terephthalate film side of a biaxial extension polyethylene terephthalate film with a thickness of 12 micrometers which has a vacuum evaporation film of a 250-Å-thick silicon oxide, 2 liquid hardening type polyurethane adhesive was applied (it is  $5\text{g/m}^2$  at a dry state), it ranked second, the 40-micrometer-thick lower density polyethylene film was used for this spreading side, and dry laminate of this was carried out. Next, using low density polyethylene for the vacuum evaporation film surface of the silicon oxide of the biaxial extension polyethylene terephthalate film which has a vacuum evaporation film of the above-mentioned silicon oxide, and extruding at 30 micrometers in thickness. The extrusion sand lamination of the cup stencil paper of basis weight  $250\text{ g/m}^2$  is carried out, To the field of this cup stencil paper, extrude and laminate low density polyethylene in thickness of 15 micrometers, and a 12-micrometer-thick biaxial extension polyethylene terephthalate film is laminated, Next, low density polyethylene was extruded and laminated in thickness of 20 micrometers in this biaxial extension polyethylene terephthalate film side, and the laminated material used for the base lid part which consists of the following composition, and a top-cover part was manufactured again. 2 extensions with a [ the vacuum evaporation film and thickness ] of of 12 micrometers of a silicon oxide with a [ a low density polyethylene layer / thickness / of 250 Å ] of with a [ the cup stencil paper / thickness / of 30 micrometers ] of with a 20-micrometer-thick [ a low density polyethylene layer / biaxial extension polyethylene terephthalate film layer / thickness ] of of 25 micrometers of a low density polyethylene layer / basis weight [ of  $250\text{g/m}^2$  ]. the lower density polyethylene film layer (3) . with a [ the adhesives layer / thickness ] of of 40 micrometers of a polyethylene terephthalate film layer / thickness  $5\text{ g/m}^2$  -- next again, Like the above to the biaxial extension polyethylene terephthalate film side of a biaxial extension polyethylene terephthalate film with a thickness of 12 micrometers which has a vacuum evaporation film of a 250-Å-thick silicon oxide, 2 liquid hardening type polyurethane adhesive was applied (it is  $5\text{g/m}^2$  at a dry state), it ranked second, the 40-micrometer-thick lower density polyethylene film was used for this spreading side, and dry laminate of this was carried out. Next, using low density polyethylene for the vacuum evaporation film surface of the silicon oxide of the biaxial extension polyethylene terephthalate film which has a vacuum evaporation film of the above-mentioned silicon oxide, and extruding at 30 micrometers in thickness. The extrusion sand lamination of the \*\*\*\*\* kraft of basis weight [ of  $80\text{g/m}^2$  ] was carried out, and the laminated material used for the pull tab which consists of the following composition was manufactured. A lower density polyethylene film layer with a [ the adhesives layer / thickness / of 40 micrometers ] of with a [ the vacuum evaporation film and thickness ] of of 12 micrometers of a silicon oxide with a [ a low density polyethylene layer / thickness / of 250 Å ] of with a [ the \*\*\*\*\* kraft / thickness ] of of 30 micrometers of basis weight  $80\text{ g/m}^2$  of 2 extension polyethylene terephthalate film layer / thickness  $5\text{ g/m}^2$ . (4) Use the laminated material used for ., next the cylindrical body manufactured by the above, and carry out skive hemming work of the end of one of these by the usual method first, and it ranks second, This laminated material was rounded off, the low density polyethylene layer and lower density polyethylene film layer of the outside and the inside were piled up in the end, subsequently it heat sealed, and the cylindrical body was manufactured. Next, the above-mentioned lower end part and upper bed part of the

cylindrical body were inserted inside, it ranked second and the gap was formed in this insertion part. On the other hand, the laminated material used for the base lid part and top-cover part which were manufactured above is used, Menko-like the base lid part and top-cover part which have beforehand a top panel and a tubed suspension part connected with this are formed, It inserted so that the tubed suspension part might overlap a cylindrical body in the gap of the upper and lower sides of the above-mentioned cylindrical body, and the both were heat sealed after an appropriate time, the seal part was formed, the top-cover part and the base lid part were attached to the upper and lower sides of a cylindrical body, respectively, and the container for a package concerning this invention was manufactured. Form the opening for taking out contents in the laminated material which constitutes the above-mentioned top-cover part beforehand, and the cut end end face of an opening, In order that contents might prevent the end face from \*\*\*\*\* (ing), end face processing of tape application processing etc. was performed to the cut end end face of the opening of this top-cover part, and it ranked second to it, and first, the filling package of the contents was carried out from this opening, the above-mentioned pull tab was pasted together to this opening after an appropriate time, and it was considered as the container for a package concerning this invention. The above-mentioned package product had advanced barrier property, and it had the filling package fitness of contents, and after use was discarded as combustion garbage and did not have any trouble.

[0029] To the biaxial extension polyethylene terephthalate film side of a biaxial extension polyethylene terephthalate film with a thickness of 12 micrometers which has a vacuum evaporation film of a silicon oxide with an working-example 2(1). thickness of 250 Å, 2 liquid hardening type polyurethane adhesive was applied (it is  $5\text{g/m}^2$  at a dry state), it ranked second, the 60-micrometer-thick lower density polyethylene film was used for this spreading side, and dry laminate of this was carried out. Next, using low density polyethylene for the vacuum evaporation film surface of the silicon oxide of the biaxial extension polyethylene terephthalate film which has a vacuum evaporation film of the above-mentioned silicon oxide, and extruding at 20 micrometers in thickness. The extrusion sand lamination of the cup stencil paper of basis weight [ of  $280\text{g/m}^2$  ] <sup>2</sup> was carried out, further, low density polyethylene was extruded and laminated in thickness of 20 micrometers in the field of this cup stencil paper, and the laminated material used for the cylindrical body which consists of the following composition was manufactured. The adhesives layer / 60 micrometers in thickness with a [ the vacuum evaporation film and thickness ] of of 12 micrometers of a silicon oxide with a [ a low density polyethylene layer / thickness / of 250 Å ] of with a 20-micrometer-thick [ the cup stencil paper / thickness ] of of 20 micrometers of a low density polyethylene layer / basis weight  $280\text{ g/m}^2$  of 2 extension polyethylene terephthalate film layer / thickness  $5\text{ g/m}^2$ . \*\*\*\*\* polyethylene film layer (2) like ., next the above to the biaxial extension polyethylene terephthalate film side of a biaxial extension polyethylene terephthalate film with a thickness of 12 micrometers which has a vacuum evaporation film of a 250-Å-thick silicon oxide, 2 liquid hardening type polyurethane adhesive was applied (it is  $5\text{g/m}^2$  at a dry state), it ranked second, the 40-micrometer-thick lower density polyethylene film was used for this spreading side, and dry laminate of this was carried out. Next, using low density polyethylene for the vacuum evaporation film surface of the silicon oxide of the biaxial extension polyethylene terephthalate film which has a vacuum evaporation film of the above-mentioned

silicon oxide, and extruding at 30 micrometers in thickness. The extrusion sand lamination of the cup stencil paper of basis weight  $250 \text{ g/m}^2$  is carried out. To the field of this cup stencil paper, extrude and laminate low density polyethylene in thickness of 15 micrometers, and a 12-micrometer-thick biaxial extension polyethylene terephthalate film is laminated. Next, low density polyethylene was extruded and laminated in thickness of 20 micrometers in this biaxial extension polyethylene terephthalate film side, and the laminated material used for the base lid part which consists of the following composition, and a top-cover part was manufactured again. 2 extensions with a [ the vacuum evaporation film and thickness ] of of 12 micrometers of a silicon oxide with a [ a low density polyethylene layer / thickness / of 250 A ] of with a [ the cup stencil paper / thickness / of 30 micrometers ] of with a 20-micrometer-thick [ a low density polyethylene layer / biaxial extension polyethylene terephthalate film layer / thickness ] of of 25 micrometers of a low density polyethylene layer / basis weight  $250 \text{ g/m}^2$ . the lower density polyethylene film layer (3) . with a [ the adhesives layer / thickness ] of of 40 micrometers of a polyethylene terephthalate film layer / thickness  $5 \text{ g/m}^2$  — next again, Like the above to the biaxial extension polyethylene terephthalate film side of a biaxial extension polyethylene terephthalate film with a thickness of 12 micrometers which has a vacuum evaporation film of a 250-A-thick silicon oxide, 2 liquid hardening type polyurethane adhesive was applied (it is  $5 \text{ g/m}^2$  at a dry state), it ranked second, the 40-micrometer-thick lower density polyethylene film was used for this spreading side, and dry laminate of this was carried out. Next, using low density polyethylene for the vacuum evaporation film surface of the silicon oxide of the biaxial extension polyethylene terephthalate film which has a vacuum evaporation film of the above-mentioned silicon oxide, and extruding at 30 micrometers in thickness. The extrusion sand lamination of the \*\*\*\*\* kraft of basis weight [ of  $80 \text{ g/m}^2$  ] <sup>2</sup> was carried out, and the laminated material used for the pull tab which consists of the following composition was manufactured. A lower density polyethylene film layer with a [ the adhesives layer / thickness / of 40 micrometers ] of with a [ the vacuum evaporation film and thickness ] of of 12 micrometers of a silicon oxide with a [ a low density polyethylene layer / thickness / of 250 A ] of with a [ the \*\*\*\*\* kraft / thickness ] of of 30 micrometers of basis weight  $80 \text{ g/m}^2$  of 2 extension polyethylene terephthalate film layer / thickness  $5 \text{ g/m}^2$ . (4) to the biaxial extension polyethylene terephthalate film side of a biaxial extension polyethylene terephthalate film with a thickness of 12 micrometers which has a vacuum evaporation film of a silicon oxide with a . thickness of 250 A, 2 liquid hardening type polyurethane adhesive was applied (it is  $5 \text{ g/m}^2$  at a dry state), it ranked second, the 40-micrometer-thick lower density polyethylene film was used for this spreading side, and dry laminate of this was carried out. Next, using low density polyethylene for the vacuum evaporation film surface of the silicon oxide of the biaxial extension polyethylene terephthalate film which has a vacuum evaporation film of the above-mentioned silicon oxide, and extruding at 30 micrometers in thickness. The extrusion sand lamination of the cup stencil paper of basis weight  $220 \text{ g/m}^2$  was carried out, further, low density polyethylene was extruded and laminated in thickness of 20 micrometers in the field of this cup stencil paper, and the laminated material used for the filling port sealant which consists of the following composition was manufactured. The adhesives layer / 40 micrometers in thickness with

a [ the vacuum evaporation film and thickness ] of of 12 micrometers of a silicon oxide with a [ a low density polyethylene layer / thickness / of 250 Å ] of with a 20-micrometer-thick [ the cup stencil paper / thickness ] of of 30 micrometers of a low density polyethylene layer / basis weight 220 g/m<sup>2</sup> of 2 extension polyethylene terephthalate film layer / thickness 5 g/m<sup>2</sup>. \*\*\*\*\* polyethylene film layer (5) Use the laminated material used for ., next the cylindrical body manufactured by the above, and carry out skive hemming work of the end of one of these by the usual method first, and it ranks second, This laminated material was rounded off, the low density polyethylene layer and lower density polyethylene film layer of the outside and the inside were piled up in the end, subsequently it heat sealed, and the cylindrical body was manufactured. Next, the above-mentioned lower end part and upper bed part of the cylindrical body were inserted inside, it ranked second and the gap was formed in this insertion part. On the other hand, the laminated material used for the base lid part and top-cover part which were manufactured above is used, Menko-like the base lid part and top-cover part which have beforehand a top panel and a tubed suspension part connected with this are formed, It inserted so that the tubed suspension part might overlap a cylindrical body in the gap of the upper and lower sides of the above-mentioned cylindrical body, and the both were heat sealed after an appropriate time, the seal part was formed, the top-cover part and the base lid part were attached to the upper and lower sides of a cylindrical body, respectively, and the container for a package concerning this invention was manufactured. Form the opening for taking out contents in the laminated material which constitutes the above-mentioned top-cover part beforehand, and the cut end end face of an opening, In order that contents might prevent the end face from \*\*\*\*\* (ing), end face processing processing of tape application processing etc. was performed to the cut end end face of the opening of this top-cover part, it ranked second to it, and the above-mentioned pull tab was beforehand pasted together and set to this opening. On the other hand, form the filling port for being filled up with contents in the laminated material which constitutes the above-mentioned base lid part beforehand, and the cut end end face of a filling port, In order that contents may prevent the end face from \*\*\*\*\* (ing), perform end face processing processing of tape application processing etc. to the cut end end face of the filling port of this base lid part, and it ranks second to it, It was filled up with contents from this filling port, this filling port was heat sealed and sealed after an appropriate time by the filling port sealant which seals the above-mentioned filling port, and it was considered as the container for a package concerning this invention. The above-mentioned package product had advanced barrier property, and it had the filling package fitness of contents, and after use was discarded as combustion garbage and did not have any trouble.

[0030]

[Effect of the Invention] This invention pays its attention to the resin film which has a thin film of an inorganic oxide clearly by the above explanation, In the container for a package which consists of a top-cover part with a pull tab attached to the cylindrical body, the base lid part attached to the lower end part of this cylindrical body, and the upper bed part of this cylindrical body, As a laminated material which constitutes this cylindrical body, a base lid part, a top-cover part, and a pull tab, The container for a package is manufactured and \*(ed) using the laminated material which contains altogether the resin film which has a thin film of an inorganic oxide, Carry out the filling package of the various goods into this



container for a package, have the high barrier property to oxygen gas, a steam, etc., and The protection justice of contents, Even if it excels in storing aptitude etc., and the fabrication operation of the container for a package, the filling package work of contents, etc. can be done easily, and it has very high filling package processing suitability further and it covers a package product over a microwave oven, even if it fully has and carries out after-use disposal treatment of the microwave oven aptitude — as combustion garbage — very — disposal treatment — the properly outstanding container for a package can be manufactured. Especially the container for a package concerning this invention all that constitute this, such as a cylindrical body, a top-cover part, a base lid part, and a pull tab, as barrier materials, from [ manufacturing with the laminated material containing the resin film layer which has a thin film of an inorganic oxide ] — very — protection of contents — it excels properly and has abandonment \*\*\* after use.

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[Translation done.]

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TECHNICAL FIELD

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[Field of the Invention] This invention relates to containers for a package suitable for the filling package of beverage liquid, such as juice, cow's milk, alcohol, water, and others, such as a paper can and a paper cup, in more detail about the container for a package.

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[Translation done.]

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PRIOR ART

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[Description of the Prior Art] Although various things are conventionally developed and proposed as a container for a package suitable for the filling package of beverage liquid, such as juice, cow's milk, alcohol, water, and others, various kinds of containers for a package, such as a glass bottle, a metal can, a synthetic resin molded container, a plastic film bag-making object, and a paper made container, are usually used. These containers for a package have various \*\*\*\*, such as filling package work justice, protection justice of contents, manufacturing-cost justice, circulation sales justice, and others, and are used widely.

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EFFECT OF THE INVENTION

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[Effect of the Invention] This invention pays its attention to the resin film which has a thin film of an inorganic oxide clearly by the above explanation, In the container for a package which consists of a top-cover part with a pull tab attached to the cylindrical body, the base lid part attached to the lower end part of this cylindrical body, and the upper bed part of this cylindrical body, As a laminated material which constitutes this cylindrical body, a base lid part, a top-cover part, and a pull tab, The container for a package is manufactured and \*(ed) using the laminated material which contains altogether the resin film which has a thin film of an inorganic oxide, Carry out the filling package of the various goods into this container for a package, have the high barrier property to oxygen gas, a steam, etc., and The protection justice of contents, Even if it excels in storing aptitude etc., and the fabrication operation of the container for a package, the filling package work of contents, etc. can be done easily, and it has very high filling package processing suitability further and it covers a package product over a microwave oven, even if it fully has and carries out after-use disposal treatment of the microwave oven aptitude — as combustion garbage — very — disposal treatment — the properly outstanding container for a package can be manufactured. Especially the container for a package concerning this invention all that constitute this, such as a cylindrical body, a top-cover part, a base lid part, and a pull tab, as barrier materials, from [ manufacturing with the laminated material containing the resin film layer which has a thin film of an inorganic oxide ] — very — protection of contents — it excels properly and has abandonment \*\*\*\* after use.

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## TECHNICAL PROBLEM

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[Problem to be solved by the invention]However, to call the container for a package ringleaders, such as environmental destruction and a waste problem, for example, to collect by type after the disposal justice as the combustion garbage or use after use, and to have \*\*\*\* from viewpoints of environment, such as the reuse-ized justice and others, or refuse disposal is needed in recent years. When manufacturing the container for a package, it is in the situation where the material which does not produce problems, such as a public nuisance, must be selected and manufactured. For example, although the above-mentioned glass bottle, metal cans, etc. are collected and it is reuse-ized, the actual condition is there being a problem it not being yet enough in the recovery, and those containers' being thrown away after use, being neglected as it is, and having become one of the causes of environmental destruction. In a synthetic resin molded container, although to collect and reproduce in a polyester molded container and to apply to other uses, for example, although it is the same as that of the above-mentioned glass bottle, a metal can, etc. is tried, it is the actual condition which cannot be referred to as still enough in the recovery itself. In a plastic film bag-making object, a paper made container, etc., For example, as a barrier property material to oxygen gas, a steam, etc., since aluminium foil etc. are used, even if it discards as combustion garbage, there is a problem of destroying a combustion furnace, and there is a problem that it is also very difficult to collect the aluminium foil between layers, etc. by type further. Then, this invention is having various \*\*\*\*, such as filling package work justice, protection justice of contents, manufacturing-cost justice, circulation sales justice, and others, and providing further the container for a package which does not cause a waste problem etc. failing in factors, such as environmental destruction and a public nuisance.

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[Translation done.]

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**MEANS**

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[Means for solving problem]this invention person pays his attention to the resin film which has a thin film of an inorganic oxide variously as a result of research that the above problems should be solved, In the container for a package which consists of a top-cover part with a pull tab attached to the cylindrical body, the base lid part attached to the lower end part of this cylindrical body, and the upper bed part of this cylindrical body, As a laminated material which constitutes this cylindrical body, a base lid part, a top-cover part, and a pull tab, The container for a package is manufactured and \*(ed) using the laminated material which contains altogether the resin film which has a thin film of an inorganic oxide, When the filling package of the various goods is carried out into this container for a package, have the high barrier property to oxygen gas, a steam, etc., and The protection justice of contents, Even if it excels in storing aptitude etc., and the fabrication operation of the container for a package, the filling package work of contents, etc. can be done easily, and it has very high filling package processing suitability further and it covers a package product over a microwave oven, even if it fully has and carries out after-use disposal treatment of the microwave oven aptitude -- as combustion garbage -- very -- disposal treatment -- it finds out that the properly outstanding container for a package can be manufactured, and this invention is completed.

[0005]Namely, in the container for a package which consists of a top-cover part with a pull tab which attached this invention to the cylindrical body, the base lid part attached to the lower end part of this cylindrical body, and the upper bed part of this cylindrical body, At least the above-mentioned cylindrical body A heat-sealing nature polyolefin resin layer, It constitutes from cup stencil paper, a resin film which has a thin film of an inorganic oxide, and a layered product which laminated the heat-sealing nature polyolefin resin layer successively, At least an above-mentioned base lid part and top-cover part A heat-sealing nature polyolefin resin layer, The resin film layer excellent in intensity, cup stencil paper, the resin film that has a thin film of an inorganic oxide, And a heat-sealing nature polyolefin resin layer is constituted from a layered

product laminated successively, It is related with the container for a package constituting from a resin film which has a thin film of a paper base and an inorganic oxide for the above-mentioned pull tab at least, and a layered product which laminated the heat-sealing nature polyolefin resin layer successively.

[0006]

[Mode for carrying out the invention]Above-mentioned this invention is explained in more detail below. First, when it explains using Drawings, by illustrating the example about the composition of the container for a package concerning this invention drawing 1, Are the composition of the container for a package concerning this invention a shown rough sectional view, and drawing 2, It is a rough sectional view showing the composition of the container for a package which consists of another form about the container for a package concerning this invention, and drawing 3, drawing 4, drawing 5, and drawing 6 are the rough sectional views showing the lamination of the laminated material used for the container for a package concerning above-mentioned this invention.

[0007]About the container A for a package concerning this invention, if the example is illustrated, as shown in drawing 1. the cylindrical body 1 and the base lid part 2 attached to the lower end part of this cylindrical body 1 with heat sealing etc. -- and, The pull tab 6 which consists of the top-cover part 3 attached to the upper bed part of this cylindrical body 1 with heat sealing etc., and has the opening 5 for taking out contents 4 grade in this top-cover part 3 further, and seals this opening 5 consists of composition attached with heat sealing etc.

[0008]Next, if the container B for a package which consists of another form about the container for a package concerning this invention again is illustrated, as shown in drawing 2. the cylindrical body 1 and the base lid part 2 attached to the lower end part of this cylindrical body 1 with heat sealing etc. -- and, Consist of the top-cover part 3 attached to the upper bed part of this cylindrical body 1 with heat sealing etc., and further in this top-cover part 3, The pull tab 6 which has the opening 5 for taking out contents 4 grade, and seals this opening 5, It is attached with heat sealing etc. and the filling port 7 which fills up the further above-mentioned base lid part 2 with the contents 4 is drilled, and further, after being filled up with the contents 4, this filling port 7 consists of composition re-closed with heat sealing etc. by the filling port sealant 8.

[0009]In the above, as a laminated material which constitutes the cylindrical body 1, If the example is given, as shown in drawing 3, from the outside at least, It comprises the heat-sealing nature polyolefin resin layer 21, the cup stencil paper 22, the resin film 23 that has a thin film of an inorganic oxide, and the laminated material C which laminated successively the heat-sealing nature polyolefin resin layer 21a. In order to \*\*, to use the above-mentioned laminated material in this invention and to manufacture a cylindrical body, Although not illustrated, round off this laminated material and, for example The field of the heat-sealing

nature polyolefin resin layer of the outside of the both-the-right-and-left-ends part, It can manufacture by piling up the field of an inside heat-sealing nature poly OREFII system resin layer, heat sealing the polymerization portion of the both the right and left ends after an appropriate time, and forming a seal part etc. In the above, as for the end face of the laminated material in the inner surface side of a cylindrical body, in order to prevent osmosis of contents, etc., it is desirable to perform end face processing processing of carrying out skive hemming work of the end face of an end, or performing tape application processing for example.

[0010]Next, in the above, again as a laminated material which constitutes a base lid part and a top-cover part, If the example is given, as shown in drawing 4, from the outside at least, It comprises the heat-sealing nature poly OREFII system resin layer 31, the resin film layer 32 excellent in intensity, the cup stencil paper 33, the resin film 34 that has a thin film of an inorganic oxide, and the laminated material D which laminated successively the heat-sealing nature polyolefin resin layer 31a. \*\* and in this invention as a method of attaching an above-mentioned base lid part or top-cover part to the above-mentioned cylindrical body, Although not illustrated, the above-mentioned lower end part and upper bed part of a cylindrical body are inserted into the inner surface side, for example, The base lid part and top-cover part of the shape of a menko which has a top panel and a tubed suspension part connected with this are inserted so that the tubed suspension part may overlap a cylindrical body in the above-mentioned gap, the both can be heat sealed in the inserted-in gap after an appropriate time, and a seal part can be formed and attached to it.

[0011]In this invention, as a laminated material which constitutes a pull tab, If the example is given, as shown in drawing 5, it is constituted from the outside at least by the paper base 41, the resin film 42 which has a thin film of an inorganic oxide, and the layered product E which laminated successively the heat-sealing nature poly OREFII system resin layer 43. In order to \*\* and to attach the above pull tabs to a top-cover part in this invention, Although not illustrated, in order to, form the opening for taking out contents in a top-cover part for example, and to seal this opening subsequently, It can attach by making the field of the heat-sealing nature polyolefin resin layer on the outside of a top-cover part, and the field of the heat-sealing nature poly OREFII system resin layer which exists inside a pull tab counter, piling up, heat sealing the both after an appropriate time, and carrying out heating welding. In this invention, the cut end end face of the opening of the above-mentioned top-cover part is not illustrated in order that contents may prevent the end face from \*\*\*\*\* (ing), but it can perform end face processing processing of tape application processing etc. to the cut end end face of the opening of this top-cover part, for example. In this invention, as a heating welding degree for attaching the above-mentioned pull tab, For example, it is desirable to carry out heating welding by the intensity of the grade which has the easy-releasability which is a grade which can adhere firmly during storage or circulation sale, and can tear off this pull tab at the time of



the use.

[0012]Next, in this invention, as a laminated material which constitutes a filling port sealant, If the example is given, as shown in drawing 6, it comprises the layered product F which laminated successively the resin film 52 which has a thin film of the paper base 51 and an inorganic oxide at least, and the heat-sealing nature poly OREFII system resin layer 53 from the outside like the laminated material which constitutes the above-mentioned pull tab. In order to \*\* and to attach the above filling port sealants to a filling port in this invention, Although not illustrated, after, forming the filling port for filling up a base lid part with contents for example, and being filled up with contents from this filling port subsequently, in order to seal this filling port, It can attach by making the field of the heat-sealing nature polyolefin resin layer on the outside of a base lid part, and the field of the heat-sealing nature poly OREFII system resin layer which exists inside a filling port sealant counter, piling up, heat sealing the both after an appropriate time, and carrying out heating welding. In this invention, the cut end end face of the filling port of the above-mentioned base lid part is not illustrated in order that contents may prevent the end face from \*\*\*\*\* (ing), but it can perform end face processing processing of tape application processing etc. to the cut end end face of the filling port of this base lid part, for example. In this invention, it is desirable to carry out heating welding firmly so that it may adhere firmly during storage or circulation sale and disclosure of contents, etc. may not be caused, for example as a heating welding degree for attaching the above-mentioned filling port sealant. In this invention, when filled up with contents from the filling port of the above-mentioned base lid part, it is needless to say that the top-cover part on which it makes it come to stick a pull tab is attached to a cylindrical body, of course.

[0013]The container for a package of the illustration illustrated above illustrates an example of the container for a package concerning this invention, and it is a thing needless to say that it is not that to which this invention is limited by this. For example, by the purpose of the container for a package, the kind of contents, a storage form, circulation and sales styles, a use, others, etc., the form of the lamination of a laminated material and the container for a package, the seal form, others, etc. can be selected arbitrarily, and the container for a package of various forms can be manufactured.

[0014]Next, in this invention, if the material used in order to manufacture the laminated material which constitutes the container for a package concerning above this inventions is explained, various things can be used as this material. First, as heat-sealing nature poly OREFUN system resin which constitutes the heat-sealing nature polyolefin resin layer located in the outside and the inside of a laminated material in this invention, Can use the film thru/or sheet of polyolefin system resin which carries out melting and can be mutually welded with heat, and specifically, For example, low density polyethylene, medium density polyethylene, high density polyethylene, Straight-chain-shape (line) low density polyethylene, polypropylene,

an ethylene-vinylacetate copolymer, ionomer resin, an ethylene-acrylic acid copolymer, an ethylene-ethyl acrylate copolymer, An ethylene-methacrylic acid copolymer, an ethylene-methyl methacrylate copolymer, Ethylene propylene rubber, methylpentene polymer, polybutene polymer, Polyolefin system resin, such as polyethylene or polypropylene, acrylic acid, The film thru/or sheets of resin denatured with unsaturated carboxylic acid, such as methacrylic acid, maleic acid, a maleic anhydride, boletic acid, and itaconic acid, such as acid modified polyolefin resin and others, can be used. It \*\* and an above-mentioned film thru/or sheet can be used in the state of the coating membrane by the constituent containing the resin. As thickness of the film or a film thru/or a sheet, 5 micrometers thru/or about 300 micrometers are preferred, and 10 micrometers thru/or about 100 micrometers are still more desirable.

[0015]Next, in this invention, again as cup stencil paper which constitutes a laminated material, This can make the formability as a container for a package, flexibility, or rigidity able to hold, and can use \*\* of strong size nature, a non-bleached paper base or paper bases, such as snow-white rolled paper, kraft, a paperboard, and a converted paper, others, etc. In the above, it is desirable as cup stencil paper the thing like basis weight [ of about 80-600g/m ]<sup>2</sup> and to use the thing like basis weight about 100 to 450 g/m<sup>2</sup> preferably. \*\*. In this invention, printing drawing of the printing pattern of a request of a character, a figure, a sign, a pattern, a pattern, etc. may be carried out by the usual print processes at the above cup stencil paper, for example.

[0016]When the resin film which has a thin film of the inorganic oxide which constitutes a laminated material in this invention is explained, first as a resin film, Anything can be used if it is the film thru/or sheet of a plastic which can hold the thin film of inorganic oxides, such as a silicon oxide and an aluminum oxide, For example, polyolefin system resin, such as polyethylene, polypropylene, and polybutene, (Meta) Acrylic resin, polyvinyl chloride system resin, polystyrene system resin, Polyvinylidene chloride system resin, an ethylene-vinylacetate copolymer saponification thing, Various kinds of film thru/or sheets of resin, such as polyvinyl alcohol, polycarbonate system resin, fluororesin, polyvinyl acetate system resin, acetal system resin, polyester system resin, polyamide system resin, and others, can be used. The film thru/or sheet of these resin may be extended by one axis thru/or 2 shaft orientations, and its about 12-300 micrometers are desirable preferably about 5-500 micrometers as the thickness. As the above-mentioned film thru/or sheet of resin, if necessary, it can coat with an anchor coat agent etc. on the surface, and smooth surface-ized processing etc. can also be performed.

[0017]Next, in this invention again as a thin film of the above-mentioned inorganic oxide, If it is the thin film which turned amorphously (amorphous) about a metaled oxide fundamentally, are usable, For example, for example, silicon (Si), aluminum (aluminum), magnesium (Mg), The

thin film which turned amorously (amorphous) the oxide of metal, such as calcium (Ca), potassium (K), tin (Sn), sodium (Na), boron (B), titanium (Ti), lead (Pb), a zirconium (Zr), and yttrium (Y), can be used. It \*\* and the thin film which turned the oxide of metal, such as silicon (Si) and aluminum (aluminum), amorously (amorphous) can be mentioned as a thing suitable for the charge of package material, etc. By the way, amorously (amorphous) the oxide of the above-mentioned metal the thin film which turned, Can call as a metallic oxide like a silicon oxide, an aluminum oxide, and magnesium oxide, and the notation, for example, it is expressed with  $MO_X$  (however -- M expresses a metallic element among a formula -- the value of X -- a metallic element -- respectively -- the range -- things -- \*\*) like  $SiO_X$ ,  $AlO_X$ , and  $MgO_X$ . As a range of the above-mentioned value of X, silicon (Si), 0-2, and aluminum (aluminum) 0-1.5, and magnesium (Mg), 0-1, and calcium (Ca) 0-1, and potassium (K), zero to 0.5, and tin (Sn) -- 0-2, and sodium (Na) -- in boron (B), zero to 0.5 can take 0-1, and a zirconium (Zr), and, as for 0-1, 5, and titanium (Ti), 0-2, and lead (Pb) can take the value of the range of 0-1.5, as for 0-2, and yttrium (Y). In the above, moreover in the case of  $X=0$  it is perfect metal, and it is not transparent and cannot use it at all, the maximum of the range of X is the value which oxidized thoroughly. In this invention, as a charge of package material, generally it is deficient in the example used except silicon (Si) and aluminum (aluminum), and, as for silicon (Si), the thing of the value of the range of 0.5-1.5 can be used for 1.0-2.0, and aluminum (aluminum). In this invention, although it changes as thickness of the thin film of the above inorganic oxides with kinds etc. of oxide of the metal to be used or metal, it is desirable to choose arbitrarily and to, form about 50-3000Å within the limits of about 100-2000Å, preferably, for example. In this invention, as a thin film of an inorganic oxide, The thin film of the inorganic oxide which was used with one sort or two sorts or more of mixtures, and was mixed with construction material of a different kind as an oxide of the metal which in the state of the layered product which laminated not only one layer of the thin film of an inorganic oxide but two-layer or more than it may be sufficient as, and is used, or metal can also be constituted.

[0018]Next, if how to form the thin film of an inorganic oxide on a resin film is explained in this invention, as a method of starting, For example, physical vapor growth, such as a vacuum deposition method, sputtering process, and the ion plating method (the Physical Vapor Deposition method, PVD), Or chemical-vapor-deposition methods (the Chemical Vapor Deposition method, a CVD method), such as plasma chemistry vapor growth, thermochemistry vapor growth, and photochemistry vapor growth, etc. can be mentioned. In this invention, when manufacturing the resin film which has a thin film of the inorganic oxide used for the charge of package material, plasma chemistry vapor growth is also mainly used in part using a vacuum deposition method. When the example is given, drawing 7 is a rough block diagram showing an example of a rolling-up type vacuum evaporation machine. As shown in drawing 7, the resin film 113 which it begins to roll and lets out from the roll 112 in the vacuum chamber 111, Pass

along the coating drum 114, enter into the vacuum evaporation chamber 115, and here, Making [ evaporate the deposition source heated with the crucible 116, and ] oxygen etc. blow off from the oxygen diffuser 117, if still more nearly necessary. On the resin film 113 on the cooled above-mentioned coating drum 114, By membrane-formation-izing the vacuum evaporation film of an inorganic oxide via the masks 118 and 118, sending out the resin film 113 which subsequently formed the vacuum evaporation film in the vacuum chamber 111, and rolling round to the winding roll 119, The resin film which has a thin film of the inorganic oxide concerning this invention can be manufactured.

[0019]In this invention, if the method of forming the thin film of an inorganic oxide is explained concretely, A vacuum deposition method which uses the oxide of the above metal as a raw material, heats this, and is vapor-deposited on a resin film, Or the oxide of metal or metal can be used for a raw material, and a vacuum evaporation film can be formed using the oxidation reaction vacuum deposition which oxygen is introduced, is oxidized and is vapor-deposited on a resin film, the oxidation reaction vacuum deposition of the plasma support type which supports oxidation reaction with plasma, etc. In this invention, when forming the vacuum evaporation film of a silicon oxide, a vacuum evaporation film can be formed using the plasma chemistry vapor growth which uses the ORGANO siloxane as a raw material.

[0020]Next, as a resin film excellent in the intensity which constitutes the resin film layer excellent in intensity in this invention again, For example, when it constitutes a base lid part and a top-cover part, from being set to one of the basic materials, Have mechanical, physical, chemical, and the character outstanding in others etc., and especially, Have intensity, it is tough, and can use the film thru/or sheet of resin which has heat resistance, and specifically, For example, the film of tough resin, such as polyester system resin, polyamide system resin, polyaramide system resin, polyolefin system resin, polycarbonate system resin, polystyrene system resin, polyacetal system resin, fluoro-resin, and others, thru/or a sheet, others, etc. can be used. It \*\* and anything, such as an oriented film extended to an unstretched film, 1 shaft orientations, or 2 shaft orientations, can be used as the above-mentioned film thru/or sheet of resin. As thickness of the film, 10 micrometers thru/or about 50 micrometers are desirable preferably 5 micrometers thru/or about 100 micrometers. In this invention, the printing pattern of the request of a character, a figure, a sign, a pattern, a pattern, etc. may be given to front printing printing or back printing printing by the usual print processes at the above base films, for example. Of course, in this invention, the resin film excellent in the above-mentioned intensity is applicable also to the laminated material which constitutes a cylindrical body, a pull tab, a filling port sealant, etc.

[0021]Next, in this invention, again as a paper base used for a pull tab or a filling port sealant, The formability as a pull tab or a filling port sealant, flexibility, rigidity, etc. can be given, and \*\* of strong size nature, a non-bleached paper base or paper bases, such as snow-white rolled

paper, kraft, a paperboard, and a converted paper, others, etc. can be used. In the above, it is desirable as a paper base the thing like basis weight about 80 to 600 g/m<sup>2</sup> and to use the thing like basis weight about 100 to 450 g/m<sup>2</sup> preferably. Of course, in this invention, various kinds of films thru/or sheets, etc. of resin excellent in a paper base and the intensity mentioned to the above as a resin film can be made to be able to laminate, and the both can be used together and used.

[0022]By the way, besides the above materials which constitute the laminated material concerning this invention in this invention, if still more nearly necessary, For example, low density polyethylene, medium density polyethylene which have the barrier property of a steam, water, etc., The film thru/or sheets of resin, such as high density polyethylene, straight-chain-shape low density polyethylene, polypropylene, and ethylene propylene rubber, Or a film thru/or sheets, etc. of resin which have the barrier property to oxygen, a steam, etc., such as a polyvinylidene chloride, polyvinyl alcohol, and an ethylene-vinylacetate copolymer saponification thing, can be used. Such materials can be used combining a kind thru/or more than it. As the above-mentioned film thru/or thickness of a sheet, although it is arbitrary, 10 micrometers thru/or about 100 micrometers are usually still more desirable 5 micrometers thru/or about 300 micrometers.

[0023]As a tape pasted together in this invention in order to process the cut end end face of the filling port of the opening of the above-mentioned top-cover part, or a base lid part, For example, it is desirable to use the tape which laminates successively the above resin film layers excellent in intensity, the resin film which has a thin film of an inorganic oxide, a heat-sealing nature polyolefin resin layer, etc. By using this, all the containers for a package concerning this invention can be used as the container for a package which has a resin film which has a thin film of an inorganic oxide.

[0024]In this invention, usually the container for a package, Since it sets to a severe condition also physically and chemically, to the wrapping which constitutes the container for a package, Severe packaging aptitude is required, and various conditions, such as deformation preventive strength, dropping impact intensity, pinhole-proof nature, heat resistance, sealing performance, quality maintainability, workability, hygienic nature, and others, are required, and for this reason, In this invention, can use the material which satisfies the above terms and conditions, choosing it still more nearly arbitrarily, and specifically, For example, low density polyethylene, medium density polyethylene, high density polyethylene, Linear low density polyethylene, polypropylene, ethylene propylene rubber, An ethylene-vinylacetate copolymer, ionomer resin, an ethylene-ethyl acrylate copolymer, Ethylene-acrylic acid or a methacrylic acid copolymer, methylpentene polymer, Polybutene system resin, polyvinyl chloride system resin, polyvinyl acetate system resin, Polyvinylidene chloride system resin, a vinyl chloride vinylidene chloride copolymer, Poly(meta) acrylic resin, polyacrylic nitrile system resin, polystyrene system resin,

an acrylonitrile styrene copolymer (AS system resin), acrylonitrile-butadiene-styrene copolymer (ABS system resin), Polyester system resin, polyamide system resin, polycarbonate system resin, It can be used choosing from the film thru/or sheets of publicly known resin, such as polyvinyl alcohol system resin, the saponification thing of an ethylene-vinylacetate copolymer, fluororesin, diene system resin, polyacetal system resin, polyurethane system resin, a nitrocellulose, and others, arbitrarily. In addition, for example, films, such as cellophane, a synthetic paper, etc. can be used. In this invention, anything, such as what was extended by un-extending, one axis, or 2 shaft orientations, can be used for an above-mentioned film thru/or sheet. The thickness can be used choosing from the range of several to about 300 micrometers, although it is arbitrary. In this invention, the film of which descriptions, such as extrusion membrane formation, inflation membrane formation, and coating membrane, may be sufficient as a film thru/or a sheet.

[0025]Next, if how to manufacture a laminated material using the above materials is explained in above-mentioned this invention, as a method of starting, The method of laminating usual wrapping, for example, the wet lamination nation method, It can carry out by dry lamination process and solventless type dry lamination process, extrusion lamination process, T-die extrusion-molding method, co-extrusion lamination process, tubular film process, a co-extrusion tubular film process, others, etc. When <sup>\*\*</sup>(ing) and performing the above-mentioned lamination in this invention, if necessary. For example, corona treatment, ozonization, etc. can be pretreated on a film, For example, an isocyanate system (urethane system), a polyethyleneimine system, Anchor coating agents, such as a poly-butadiene system and an organic titanium system, or a polyurethane system, Publicly known pretreatment of adhesives for a lamination, such as poly acrylic, a polyester system, an epoxy system, a polyvinyl acetate system, a cellulose type, and others, etc., an anchor coat agent, adhesives, etc. can be used.

[0026]Next, if how to manufacture the container for a package using the above laminated materials is explained in this invention, For example, the above laminated materials are used, the blank plate which will, from now on, manufacture the desired container for a package is manufactured, box producing of a drum section, a pars basilaris ossis occipitalis, the head, etc. can be carried out after an appropriate time using this blank plate, and the container for a package of various forms can be manufactured. Anything of forms, such as a cone type, a square shape type, and a round shape, can manufacture the form.

[0027]In this invention, the container for a package manufactured as mentioned above can be used as a paper can, a paper cup, etc. suitable for the filling package of various kinds of beverage liquid, such as juice, cow's milk, alcohol, water, and others, for example. The container for a package concerning this invention is used for the filling package of goods, such as various kinds of sundry articles, such as various kinds of drugs, such as various kinds of cosmetics, such as various kinds of chemical products, such as adhesives and a binder,

cream, and cosmetic liquid, medicine, and a diagnostic drug, and a detergent, and others.

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[Translation done.]

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## EXAMPLE

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[Working example]An working example is given and above-mentioned this invention is explained still more concretely.

To the biaxial extension polyethylene terephthalate film side of a biaxial extension polyethylene terephthalate film with a thickness of 12 micrometers which has a vacuum evaporation film of a silicon oxide with an working-example 1(1). thickness of 250 Å, 2 liquid hardening type polyurethane adhesive was applied (it is  $5\text{g/m}^2$  at a dry state), it ranked second, the 60-micrometer-thick lower density polyethylene film was used for this spreading side, and dry laminate of this was carried out. Next, using low density polyethylene for the vacuum evaporation film surface of the silicon oxide of the biaxial extension polyethylene terephthalate film which has a vacuum evaporation film of the above-mentioned silicon oxide, and extruding at 20 micrometers in thickness. The extrusion sand lamination of the cup stencil paper of basis weight  $280\text{ g/m}^2$  was carried out, further, low density polyethylene was extruded and laminated in thickness of 20 micrometers in the field of this cup stencil paper, and the laminated material used for the cylindrical body which consists of the following composition was manufactured. The adhesives layer / 60 micrometers in thickness with a [ the vacuum evaporation film and thickness ] of of 12 micrometers of a silicon oxide with a [ a low density polyethylene layer / thickness / of 250 Å ] of with a 20-micrometer-thick [ the cup stencil paper / thickness ] of of 20 micrometers of a low density polyethylene layer / basis weight  $280\text{ g/m}^2$  of 2 extension polyethylene terephthalate film layer / thickness  $5\text{ g/m}^2$ . \*\*\*\*\* polyethylene film layer (2) like ., next the above to the biaxial extension polyethylene terephthalate film side of a biaxial extension polyethylene terephthalate film with a thickness of 12 micrometers which has a vacuum evaporation film of a 250-Å-thick silicon oxide, 2 liquid hardening type polyurethane adhesive was applied (it is  $5\text{g/m}^2$  at a dry state), it ranked second, the 40-micrometer-thick lower density polyethylene film was used for this spreading side, and dry laminate of this was



carried out. Next, using low density polyethylene for the vacuum evaporation film surface of the silicon oxide of the biaxial extension polyethylene terephthalate film which has a vacuum evaporation film of the above-mentioned silicon oxide, and extruding at 30 micrometers in thickness. The extrusion sand lamination of the cup stencil paper of basis weight [ of 250g/m ]<sup>2</sup> is carried out, To the field of this cup stencil paper, extrude and laminate low density polyethylene in thickness of 15 micrometers, and a 12-micrometer-thick biaxial extension polyethylene terephthalate film is laminated, Next, low density polyethylene was extruded and laminated in thickness of 20 micrometers in this biaxial extension polyethylene terephthalate film side, and the laminated material used for the base lid part which consists of the following composition, and a top-cover part was manufactured again. 2 extensions with a [ the vacuum evaporation film and thickness ] of of 12 micrometers of a silicon oxide with a [ a low density polyethylene layer / thickness / of 250 A ] of with a [ the cup stencil paper / thickness / of 30 micrometers ] of with a 20-micrometer-thick [ a low density polyethylene layer / biaxial extension polyethylene terephthalate film layer / thickness ] of of 25 micrometers of a low density polyethylene layer / basis weight 250 g/m<sup>2</sup>. the lower density polyethylene film layer (3) . with a [ the adhesives layer / thickness ] of of 40 micrometers of a polyethylene terephthalate film layer / 5g[ in thickness //m ]<sup>2</sup> -- next again, Like the above to the biaxial extension polyethylene terephthalate film side of a biaxial extension polyethylene terephthalate film with a thickness of 12 micrometers which has a vacuum evaporation film of a 250-A-thick silicon oxide, 2 liquid hardening type polyurethane adhesive was applied (it is 5g/m<sup>2</sup> at a dry state), it ranked second, the 40-micrometer-thick lower density polyethylene film was used for this spreading side, and dry laminate of this was carried out. Next, using low density polyethylene for the vacuum evaporation film surface of the silicon oxide of the biaxial extension polyethylene terephthalate film which has a vacuum evaporation film of the above-mentioned silicon oxide, and extruding at 30 micrometers in thickness. The extrusion sand lamination of the \*\*\*\*\* kraft of basis weight [ of 80g/m ]<sup>2</sup> was carried out, and the laminated material used for the pull tab which consists of the following composition was manufactured. A lower density polyethylene film layer with a [ the adhesives layer / thickness / of 40 micrometers ] of with a [ the vacuum evaporation film and thickness ] of of 12 micrometers of a silicon oxide with a [ a low density polyethylene layer / thickness / of 250 A ] of with a [ the \*\*\*\*\* kraft / thickness ] of of 30 micrometers of basis weight [ of 80g/m ]<sup>2</sup> of 2 extension polyethylene terephthalate film layer / thickness 5 g/m<sup>2</sup>. (4) Use the laminated material used for ., next the cylindrical body manufactured by the above, and carry out skive hemming work of the end of one of these by the usual method first, and it ranks second, This laminated material was rounded off, the low density polyethylene layer and lower density polyethylene film layer of the outside and the inside were piled up in the end, subsequently it heat sealed,

and the cylindrical body was manufactured. Next, the above-mentioned lower end part and upper bed part of the cylindrical body were inserted inside, it ranked second and the gap was formed in this insertion part. On the other hand, the laminated material used for the base lid part and top-cover part which were manufactured above is used, Menko-like the base lid part and top-cover part which have beforehand a top panel and a tubed suspension part connected with this are formed, It inserted so that the tubed suspension part might overlap a cylindrical body in the gap of the upper and lower sides of the above-mentioned cylindrical body, and the both were heat sealed after an appropriate time, the seal part was formed, the top-cover part and the base lid part were attached to the upper and lower sides of a cylindrical body, respectively, and the container for a package concerning this invention was manufactured. Form the opening for taking out contents in the laminated material which constitutes the above-mentioned top-cover part beforehand, and the cut end end face of an opening, In order that contents might prevent the end face from \*\*\*\*\* (ing), end face processing processing of tape application processing etc. was performed to the cut end end face of the opening of this top-cover part, and it ranked second to it, and first, the filling package of the contents was carried out from this opening, the above-mentioned pull tab was pasted together to this opening after an appropriate time, and it was considered as the container for a package concerning this invention. The above-mentioned package product had advanced barrier property, and it had the filling package fitness of contents, and after use was discarded as combustion garbage and did not have any trouble.

[0029]To the biaxial extension polyethylene terephthalate film side of a biaxial extension polyethylene terephthalate film with a thickness of 12 micrometers which has a vacuum evaporation film of a silicon oxide with an working-example 2(1). thickness of 250 Å, 2 liquid hardening type polyurethane adhesive was applied (it is  $5\text{g/m}^2$  at a dry state), it ranked second, the 60-micrometer-thick lower density polyethylene film was used for this spreading side, and dry laminate of this was carried out. Next, using low density polyethylene for the vacuum evaporation film surface of the silicon oxide of the biaxial extension polyethylene terephthalate film which has a vacuum evaporation film of the above-mentioned silicon oxide, and extruding at 20 micrometers in thickness. The extrusion sand lamination of the cup stencil paper of basis weight  $280\text{ g/m}^2$  was carried out, further, low density polyethylene was extruded and laminated in thickness of 20 micrometers in the field of this cup stencil paper, and the laminated material used for the cylindrical body which consists of the following composition was manufactured. The adhesives layer / 60 micrometers in thickness with a [ the vacuum evaporation film and thickness ] of of 12 micrometers of a silicon oxide with a [ a low density polyethylene layer / thickness / of 250 Å ] of with a 20-micrometer-thick [ the cup stencil paper / thickness ] of of 20 micrometers of a low density polyethylene layer / basis weight  $280\text{ g/m}^2$  of

2 extension polyethylene terephthalate film layer / thickness  $5 \text{ g/m}^2$ . \*\*\*\*\* polyethylene film layer (2) like ., next the above to the biaxial extension polyethylene terephthalate film side of a biaxial extension polyethylene terephthalate film with a thickness of 12 micrometers which has a vacuum evaporation film of a 250-A-thick silicon oxide, 2 liquid hardening type polyurethane adhesive was applied (it is  $5 \text{ g/m}^2$  at a dry state), it ranked second, the 40-micrometer-thick lower density polyethylene film was used for this spreading side, and dry laminate of this was carried out. Next, using low density polyethylene for the vacuum evaporation film surface of the silicon oxide of the biaxial extension polyethylene terephthalate film which has a vacuum evaporation film of the above-mentioned silicon oxide, and extruding at 30 micrometers in thickness. The extrusion sand lamination of the cup stencil paper of basis weight [ of  $250 \text{ g/m}^2$  ] is carried out, To the field of this cup stencil paper, extrude and laminate low density polyethylene in thickness of 15 micrometers, and a 12-micrometer-thick biaxial extension polyethylene terephthalate film is laminated, Next, low density polyethylene was extruded and laminated in thickness of 20 micrometers in this biaxial extension polyethylene terephthalate film side, and the laminated material used for the base lid part which consists of the following composition, and a top-cover part was manufactured again. 2 extensions with a [ the vacuum evaporation film and thickness ] of of 12 micrometers of a silicon oxide with a [ a low density polyethylene layer / thickness / of 250 A ] of with a [ the cup stencil paper / thickness / of 30 micrometers ] of with a 20-micrometer-thick [ a low density polyethylene layer / biaxial extension polyethylene terephthalate film layer / thickness ] of of 25 micrometers of a low density polyethylene layer / basis weight [ of  $250 \text{ g/m}^2$  ]. the lower density polyethylene film layer (3) . with a [ the adhesives layer / thickness ] of of 40 micrometers of a polyethylene terephthalate film layer / thickness  $5 \text{ g/m}^2$  -- next again, Like the above to the biaxial extension polyethylene terephthalate film side of a biaxial extension polyethylene terephthalate film with a thickness of 12 micrometers which has a vacuum evaporation film of a 250-A-thick silicon oxide, 2 liquid hardening type polyurethane adhesive was applied (it is  $5 \text{ g/m}^2$  at a dry state), it ranked second, the 40-micrometer-thick lower density polyethylene film was used for this spreading side, and dry laminate of this was carried out. Next, using low density polyethylene for the vacuum evaporation film surface of the silicon oxide of the biaxial extension polyethylene terephthalate film which has a vacuum evaporation film of the above-mentioned silicon oxide, and extruding at 30 micrometers in thickness. The extrusion sand lamination of the \*\*\*\*\* kraft of basis weight  $80 \text{ g/m}^2$  was carried out, and the laminated material used for the pull tab which consists of the following composition was manufactured. A lower density polyethylene film layer with a [ the adhesives layer / thickness / of 40 micrometers ] of with a [ the vacuum evaporation film and thickness ] of of 12 micrometers of a silicon oxide with a [ a low density polyethylene layer / thickness / of 250 A ] of with a [ the \*\*\*\*\* kraft / thickness ] of

of 30 micrometers of basis weight  $80 \text{ g/m}^2$  of 2 extension polyethylene terephthalate film layer / thickness  $5 \text{ g/m}^2$ . (4) to the biaxial extension polyethylene terephthalate film side of a biaxial extension polyethylene terephthalate film with a thickness of 12 micrometers which has a vacuum evaporation film of a silicon oxide with a . thickness of 250 Å, 2 liquid hardening type polyurethane adhesive was applied (it is  $5 \text{ g/m}^2$  at a dry state), it ranked second, the 40-micrometer-thick lower density polyethylene film was used for this spreading side, and dry laminate of this was carried out. Next, using low density polyethylene for the vacuum evaporation film surface of the silicon oxide of the biaxial extension polyethylene terephthalate film which has a vacuum evaporation film of the above-mentioned silicon oxide, and extruding at 30 micrometers in thickness. The extrusion sand lamination of the cup stencil paper of basis weight  $220 \text{ g/m}^2$  was carried out, further, low density polyethylene was extruded and laminated in thickness of 20 micrometers in the field of this cup stencil paper, and the laminated material used for the filling port sealant which consists of the following composition was manufactured. The adhesives layer / 40 micrometers in thickness with a [ the vacuum evaporation film and thickness ] of of 12 micrometers of a silicon oxide with a [ a low density polyethylene layer / thickness / of 250 Å ] of with a 20-micrometer-thick [ the cup stencil paper / thickness ] of of 30 micrometers of a low density polyethylene layer / basis weight  $220 \text{ g/m}^2$  of 2 extension polyethylene terephthalate film layer / thickness  $5 \text{ g/m}^2$ . \*\*\*\*\* polyethylene film layer (5) Use the laminated material used for ., next the cylindrical body manufactured by the above, and carry out skive hemming work of the end of one of these by the usual method first, and it ranks second, This laminated material was rounded off, the low density polyethylene layer and lower density polyethylene film layer of the outside and the inside were piled up in the end, subsequently it heat sealed, and the cylindrical body was manufactured. Next, the above-mentioned lower end part and upper bed part of the cylindrical body were inserted inside, it ranked second and the gap was formed in this insertion part. On the other hand, the laminated material used for the base lid part and top-cover part which were manufactured above is used, Menko-like the base lid part and top-cover part which have beforehand a top panel and a tubed suspension part connected with this are formed, It inserted so that the tubed suspension part might overlap a cylindrical body in the gap of the upper and lower sides of the above-mentioned cylindrical body, and the both were heat sealed after an appropriate time, the seal part was formed, the top-cover part and the base lid part were attached to the upper and lower sides of a cylindrical body, respectively, and the container for a package concerning this invention was manufactured. Form the opening for taking out contents in the laminated material which constitutes the above-mentioned top-cover part beforehand, and the cut end end face of an opening, In order that contents might prevent the end face from \*\*\*\*\* (ing), end face processing processing of tape application processing etc. was performed to the cut end

end face of the opening of this top-cover part, it ranked second to it, and the above-mentioned pull tab was beforehand pasted together and set to this opening. On the other hand, form the filling port for being filled up with contents in the laminated material which constitutes the above-mentioned base lid part beforehand, and the cut end end face of a filling port, In order that contents may prevent the end face from \*\*\*\*\* (ing), perform end face processing processing of tape application processing etc. to the cut end end face of the filling port of this base lid part, and it ranks second to it, It was filled up with contents from this filling port, this filling port was heat sealed and sealed after an appropriate time by the filling port sealant which seals the above-mentioned filling port, and it was considered as the container for a package concerning this invention. The above-mentioned package product had advanced barrier property, and it had the filling package fitness of contents, and after use was discarded as combustion garbage and did not have any trouble.

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[Translation done.]

\* NOTICES \*

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- 1.This document has been translated by computer. So the translation may not reflect the original precisely.
- 2.\*\*\* shows the word which can not be translated.
- 3.In the drawings, any words are not translated.

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## DESCRIPTION OF DRAWINGS

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### [Brief Description of the Drawings]

[Drawing 1] It is a rough sectional view showing the composition of the container for a package concerning this invention.

[Drawing 2] It is a rough sectional view showing the composition of the container for a package which consists of another form about the container for a package concerning this invention.

[Drawing 3] It is a rough sectional view showing the lamination of the laminated material used for the container for a package concerning this invention.

[Drawing 4] It is a rough sectional view showing the lamination of the laminated material used for the container for a package concerning this invention.

[Drawing 5] It is a rough sectional view showing the lamination of the laminated material used for the container for a package concerning this invention.

[Drawing 6] It is a rough sectional view showing the lamination of the laminated material used for the container for a package concerning this invention.

[Drawing 7] It is a rough block diagram showing an example of a rolling-up type vacuum evaporation machine.

### [Explanations of letters or numerals]

- 1 Cylindrical body
- 2 Base lid part
- 3 Top-cover part
- 4 Contents
- 5 Opening
- 6 Pull tab
- 7 Filling port
- 8 Filling port sealant
- 21 Heat-sealing nature polyolefin resin layer

- 22 Cup stencil paper
- 23 The resin film which has a thin film of an inorganic oxide
- 21a Heat-sealing nature polyolefin resin layer
- 31 Heat-sealing nature poly OREFII system resin layer
- 32 The resin film layer excellent in intensity
- 33 Cup stencil paper
- 34 The resin film which has a thin film of an inorganic oxide
- 31a Heat-sealing nature polyolefin resin layer
- 41 Paper base
- 42 The resin film which has a thin film of an inorganic oxide
- 43 Heat-sealing nature poly OREFII system resin layer
- 51 Paper base
- 52 The resin film which has a thin film of an inorganic oxide
- 53 Heat-sealing nature poly OREFII system resin layer
- 111 Vacuum chamber
- 112 It begins to wind and is a roll.
- 113 Resin film
- 114 Coating drum
- 115 Vacuum evaporation chamber
- 116 Crucible
- 117 Oxygen diffuser
- 118 Mask
- 119 Winding roll
- A The container for a package
- B -- the container for a package which consists of another form
- C Laminated material
- D Laminated material
- E Laminated material
- F Laminated material

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[Translation done.]

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2.\*\*\*\* shows the word which can not be translated.

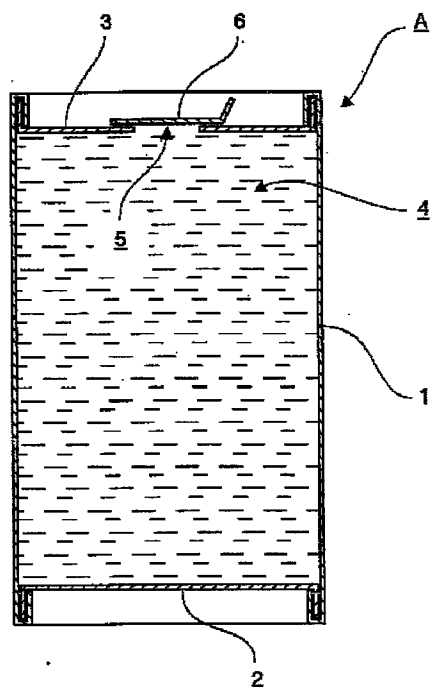
3.In the drawings, any words are not translated.

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## DRAWINGS

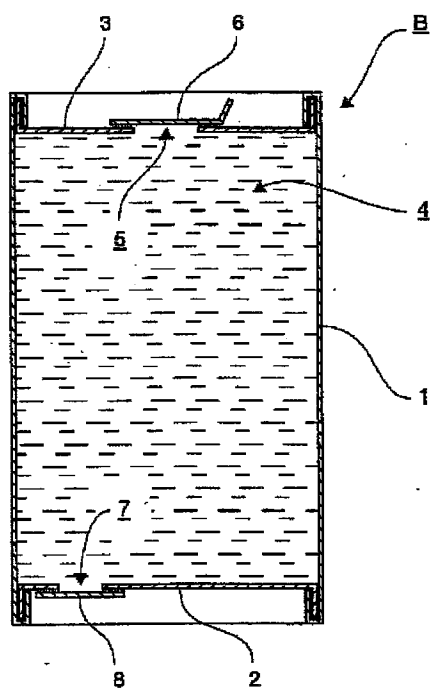
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[Drawing 1]

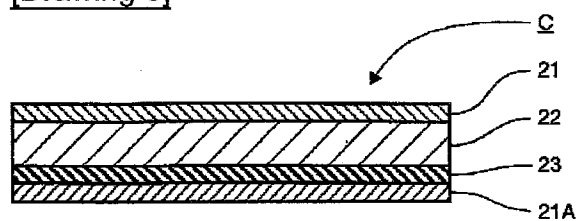


[Drawing 2]

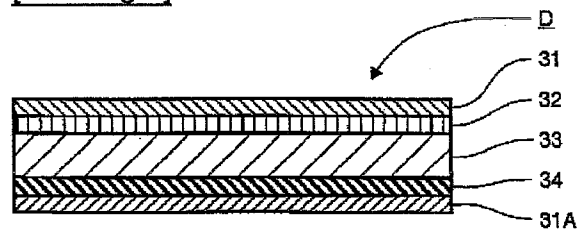




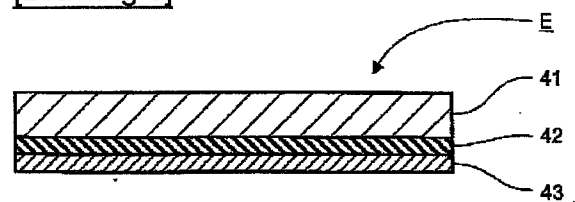
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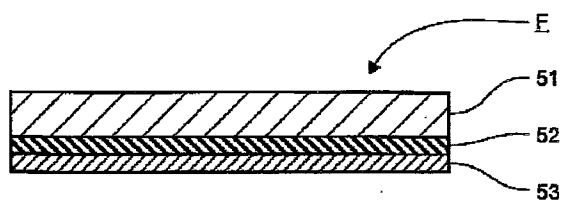
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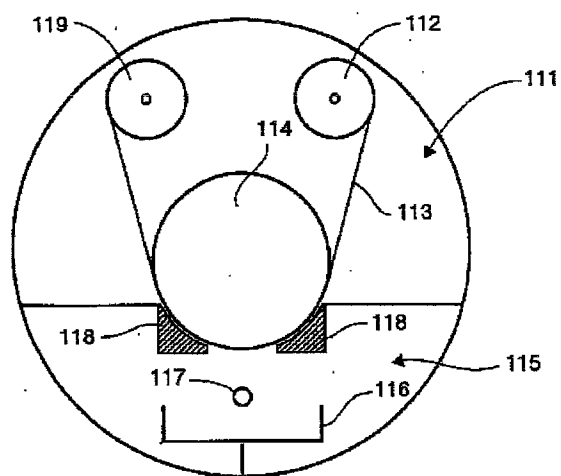
[Drawing 5]



[Drawing 6]



[Drawing 7]



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[Translation done.]